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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,652	11/12/1999	NOBUO SASAKI	SCEI-16.677	9667

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KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT PAPER NUMBER

2672

DATE MAILED: 03/22/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/438,652

Applicant(s)

SASAKI ET AL.

Examiner

Motilewa A. Good-Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/12/1999 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the following communications: application, filed on 11/12/1999; IDS, paper #4, filed on 06/06/2000; IDS, paper #5, filed on 08/21/2000; Amendment A, filed 04/17/2003; Amendment B, filed 11/18/2003.
2. Claims 1-11 are pending in this application. Claims 1 and 6 are independent claims.
3. The present title of this application is "Image Generation Method and Image Generation Device" (as originally filed).

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/23/2003 has been entered.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention merely manipulates an abstract idea, which is non-statutory subject matter.

Claims that are noted above as being rejected but that are not specifically cited below are rejected based on their dependency on rejected independent claims as incorporating the errors of those claims and not imparting any features leading to statutory subject matter.

With respect to dependent claim 1, the claim recites "multiplying each texture that have been mapped by each modulation texture". The disclosed invention has a practical application, e.g., modulating a texture. The disclosed invention is within the technological arts. However, the steps of the method do not recite any post-computer process activity, i.e., no independent physical acts, and the steps of the method do not recite any pre-computer process activity, i.e., no manipulation of data representing physical objects or activities.

Therefore, in order to determine if the process is statutory, one must determine what the computer does to achieve a practical application. A process that merely manipulates an abstract idea is non-statutory despite the fact that it might inherently have some usefulness. For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea. Examiner finds no limitation to a practical application for the claimed method. As an illustration of the lack of limitation to a particular, practical application, the method claimed by Applicant could be accomplished by mental steps of one of ordinary skill in the art aided by pencil and

paper. The multiplication of a texture by a modulation texture is merely an abstract idea. The preamble of the claim is given little weight in establishing a statutory claim when there are no elements in the claim limitations into which the preamble could give substantial meaning of a practical limitation. Therefore, when taken as a whole, the claim recites manipulation of an abstract idea. See *In re Schrader*, 22 F.3d 290, 30 USPQ2d 1455 (Fed. Cir. 1994), and *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-11 rejected under 35 U.S.C. 102(a) as being anticipated by Barad et al., *Real-Time Procedural Texturing Techniques Using MMX*, GamaNetwork, May 1, 1998, (numbered by Examiner pages 1-20).

As per independent claim 1, an image generation method for generating a two-dimensional image by texture mapping to three-dimensional polygons including textures to be mapped to generate an overall pattern on a polygon, and modulation textures, comprising the of: multiplying a texture by a modulation texture. (Barad discloses an

original texture, figure 3.1 scaled by an amplitude modification factor and added together, page 3, to create a final image texture, i.e. multiplication)

With respect to dependent claim 2, wherein in said multiplying step an amplitude is made smaller with increasing distance from the vicinity of a viewpoint. (Barad discloses the amplitude modification factor of smaller factors, page 3, and further discloses the noise function is assigned to each location in space, page 2)

With respect to dependent claim 3, repetition period of textures and a repetition period of modulation textures are offset from each other. (Barad discloses Perlin's noise and iterations of applying the noise as octaves, i.e. period, and the number of octaves as generated by the octave equation, page 2)

With respect to dependent claim 4, modulation texture is set to higher spatial frequencies than those of said texture, with color information removed from said texture. (Barad discloses calculating a wood texture with different shade of brown and black modeled by an equation and using a random offset, turbulence value, to calculate the final color, pages 3-4)

With respect to dependent claim 5, modulation texture consists of different patterns from said texture. (Barad discloses using scaled amplitude modification factors to generate scaled noise functions, page 2)

As per independent claim 6, an image generation device for generating a two-dimensional image by texture mapping . . . comprising: a memory means that stores textures to be mapped to generate an overall pattern . . . (Barad discloses in the marble texturing algorithm inputting an initial texture into a texture map, page 7) modulation

textures used to amplitude-modulate the patterns generated by mapping of the textures; (Barad discloses for each image, scaling the amplitude by varying amounts and varying the magnification of the scene for each image and summing the images together, page 2) and a multiplying means multiplying a texture by a modulation texture. (Barad discloses in the marble texturing algorithm multiplication of the alignPixNum by the turbulence, page 7)

With respect to dependent claims 7-10, they are rejected based upon similar rational as above dependent claims 2-5.

With respect to dependent claim 11, a pixel value of a modulation texture represents the intensity for multiplying to the pixel value of an image drawn using said texture. (Barad discloses a pixel table for storing and calculating the DDU values, page 10)

Response to Arguments

7. Applicant's arguments filed 12/23/2003 have been fully considered but they are not persuasive.

Applicant argues that textures that have been mapped are multiplied by modulation textures. Barad discloses that the textures are multiplied by a modulation and to generate the final texture the modulated textures that have been mapped are summed together.

Applicant argues that Barad fails to disclose textures that have been mapped multiplied by a modulation texture. Barad discloses on page 2, a image treated as a

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height map, which the Examiner interprets as a mapped texture, and further discloses scaling the amplitude of the height of the hills by varying amounts, thus modulating the height map, and further discloses summing the images together, which Examiner interprets as a mapped texture multiplied by a modulation texture. It is inherent that multiplication constitutes a form of addition and therefore it is the Examiner's opinion that Barad discloses multiplication of the mapped texture by each modulation texture by summation of the original image with Perlin noise, i.e. a mapped texture, and output image which is the image with noise functions scaled, i.e. modulated, and summed together, which constitutes multiplication of a texture mapped by modulated textures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

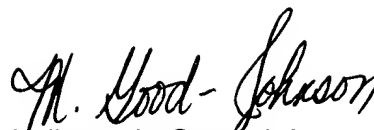
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

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A handwritten signature in black ink, reading "M. Good-Johnson". The signature is written in a cursive, flowing style.

Motilewa A. Good-Johnson

Examiner

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mgj

March 17, 2004